

Mouse Perfusion Worksheet

Anesthesia

3/28/07

Mice				
• Chloral Hydrate				
• Weight				
• PB + Heparin				
• 4% Paraformaldehyde				

Preparation

- Make enough PB + Heparin and 4% Paraformaldehyde, pH 7.4
- Flush infusion line with water
- Place line into PB + heparin (30-40 ml/animal; 100 μ l / 100 mL PB, pH 7.4)

Surgery

- Inject **Chloral Hydrate** ip into mouse LEFT lower Cup Quadrant (Males: 0.2 ml, Females: 0.15 ml)
- Measure mouse's weight while waiting for Chloral Hydrate to take effect.
- Test Anesthetic by squeezing and pulling lower paws with forceps, and by pinching tail tip.
- Lay mouse on paraffin block and secure forepaws with pins. Tilt block on lip of dissecting table (so blood runs above head)
- Opening the Cavity:
 1. Lateral incision across the **Sternum**
(keep blade up along the inside of the incision and away from the vital organs).
 2. Lateral incision across **Diaphragm**
 3. Two incisions on both ends of **diaphragm** across the ribs and towards head.
 4. Grasp sternum and roll hemostat towards head, slightly lifting heart out of cavity
- Heart:**
 1. Grasp heart with bulldog clamp and hold so that the interventricular septum (dark line) is parallel to the anticipated path of the needle of the winged infusion set (19 Ga).
 2. Insert needle into the Left Ventricle and clamp site of insertion with bulldog clamp
 3. Cut the right atrium
- Infuse **PB + heparin** until blood runs clear (3 min, 30-40 mL): _____
 pump speed = ~3
 Signs of proper infusion:
 1. Movement in all 4 limbs (remove pins from forepaws)
 2. liver is clearing
 3. Ear veins disappear
- Stop infusion (turn pump off)
- Switch infusion to 4% Paraformaldehyde, pH 7.4
- Restart infusion (8-9 min, 50 mL)
Test limbs for stiffness...